



**STONINGTON WATER POLLUTION
CONTROL AUTHORITY**

**Summary of Operations & Maintenance
Activities at the
SWPCA Wastewater Facilities**

March 2020



Project Management Report

Significant Project News and Events

The Pawcatuck, Mystic and Stonington Borough Wastewater Treatment facilities were in regulatory compliance with every aspect of their relative Permits.

Mystic flow for this month averaged 0.68 MGD, the high flow limit is below the 180 day average of the 90% of the design limit of 0.72 MGD with the 180 day average flow of 0.69 MGD.

The Lindberg pump station is running on the HOMA pumps. Suez has re-engaged with HOMA and Blake representatives regarding pumps lifting off the seats. Suez has also engaged LaFleur Elec. to install a temporary VFD as a fix.

Suez provided Mystic flows for the SWPCA Director.

Suez COVID Operations

Suez is currently operating at a Level 3 condition, described below.

Suez has minimized staff present at each facility starting on March 23rd due to COVID-19 virus pandemic in an effort to reduce spread of virus and provide continuity of service.

Only one operator will be working at each facility until further notice. Operators are rotating weekly between working and quarantining at home. Non-essential visitors are not allowed at the facility and staff continues to disinfect door handles, and other common areas as a precaution.

The mechanics are each responsible for a set of pumping stations and are available to assist operators, as needed. Additionally, the mechanics are all on-call until reassessment and review is necessary.

Clarifications

Answers to or clarifications of concerns of previous monthly report

None

	UNITS	PAWCATUCK	BOROUGH	MYSTIC
FLOW				
Total Monthly Flow	MG	17.236	3.317	20.960
Average Daily Flow	MGD	0.556	0.107	0.676
Daily Peak Flow	MG	0.688	0.150	1.990
TREATMENT RESULTS				
Biochemical Oxygen Demand				
<i>Influent</i>	mg/l	154	165	193
<i>Effluent</i>	mg/l	3	3	3
<i>Percent Removal</i>	%	98%	98%	98%
<i>Minimum Permit % Removal</i>	%	85%	85%	85%
Suspended Solids				
<i>Influent</i>	mg/l	189	181	480
<i>Effluent</i>	mg/l	6	3	6
<i>Percent Removal</i>	%	97%	99%	99%
<i>Minimum Permit % Removal</i>	%	85%	85%	85%
Nutrients				
Influent Nutrients				
<i>Ammonia Nitrogen</i>	mg/l	22.8	30.6	21.3
<i>Total Kjeldahl Nitrogen</i>	mg/l	35.2	46.4	55.0
<i>Nitrate + Nitrite Nitrogen</i>	mg/l	0.1	0.5	0.0
<i>Total Nitrogen</i>	mg/l	35.2	46.9	54.5
Effluent Nutrients				
<i>Ammonia Nitrogen</i>	mg/l	1.2	2.4	0.2
<i>Total Kjeldahl Nitrogen</i>	mg/l	2.6	4.0	2.2
<i>Nitrate + Nitrite Nitrogen</i>	mg/l	1.4	0.5	0.1
<i>Total Nitrogen</i>	mg/l	3.9	4.6	2.2
<i>% Removal</i>	%	89%	90%	96%
CHEMICAL USAGE				
Sodium Hypochlorite				
<i>Monthly Total Treated</i>	gallons	0	0	0
<i>Daily Average Treated</i>	gallons	0	0	0
Polymer				
<i>Monthly Total Treated</i>	pounds	99	33	1,480
<i>Daily Average Treated</i>	pounds	3.2	1.1	48.0
ELECTRICAL USAGE				
<i>WPCF</i>	Kwh	34,752	52,032	81,408
<i>All stations</i>	Kwh	14,610	5,996	9,580
<i>Total</i>	Kwh	49,362	58,028	90,988
SOLIDS RESIDUALS				
<i>Monthly Total</i>	pounds	23,504	7,326	20,270
	dry tons	11.8	3.7	10.1

Pawcatuck Water Pollution Control Facility

Operational Events

- We had no NPDES permit violations for the month of March.
- No CT-DEEP inspections were performed in March.
- 7.4" of rain/snow for the month.
- 42,700 gallons of thickened sludge removed.
- All daily, weekly, monthly and quarterly sampling complete.

Call-In Alarm(s): 2

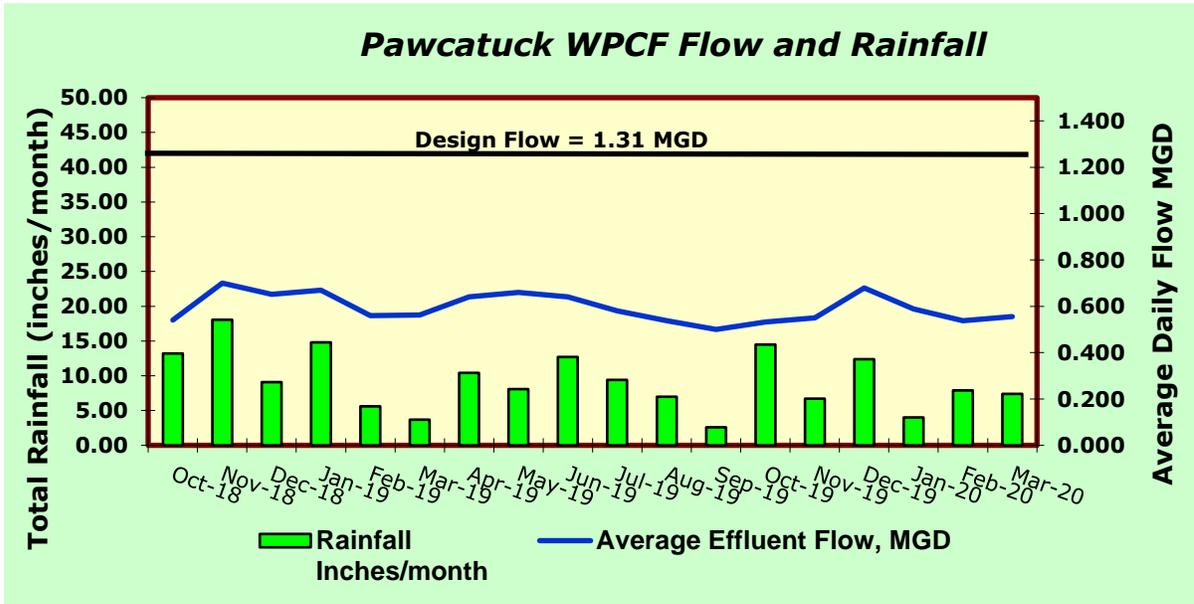
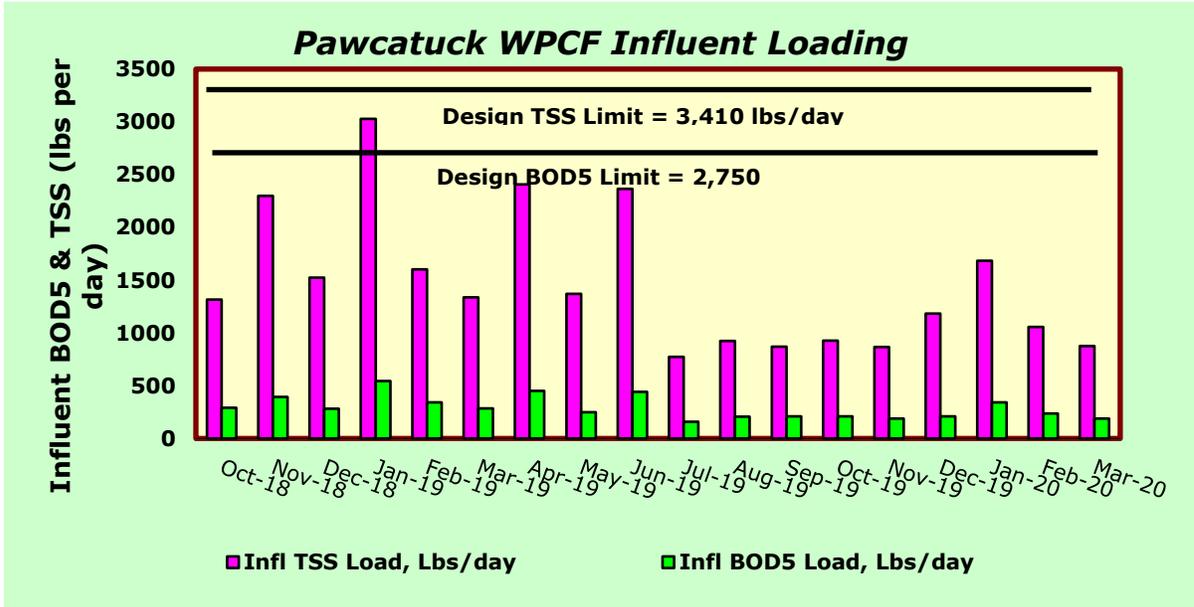
- ✓ SCADA call in on March 13 at 2020 for clogged pump at Mechanic Street pumping station. Maintenance cleans/de-ragged pump. Back to normal. Alarm for pump 2 failure reset.
- ✓ SCADA calls on March 14, 17, 21 and 29 for communication failures at White Rock pumping station. Reboot direct logics at plant and station. Cell phone not working properly for communications. (some due to wet weather).

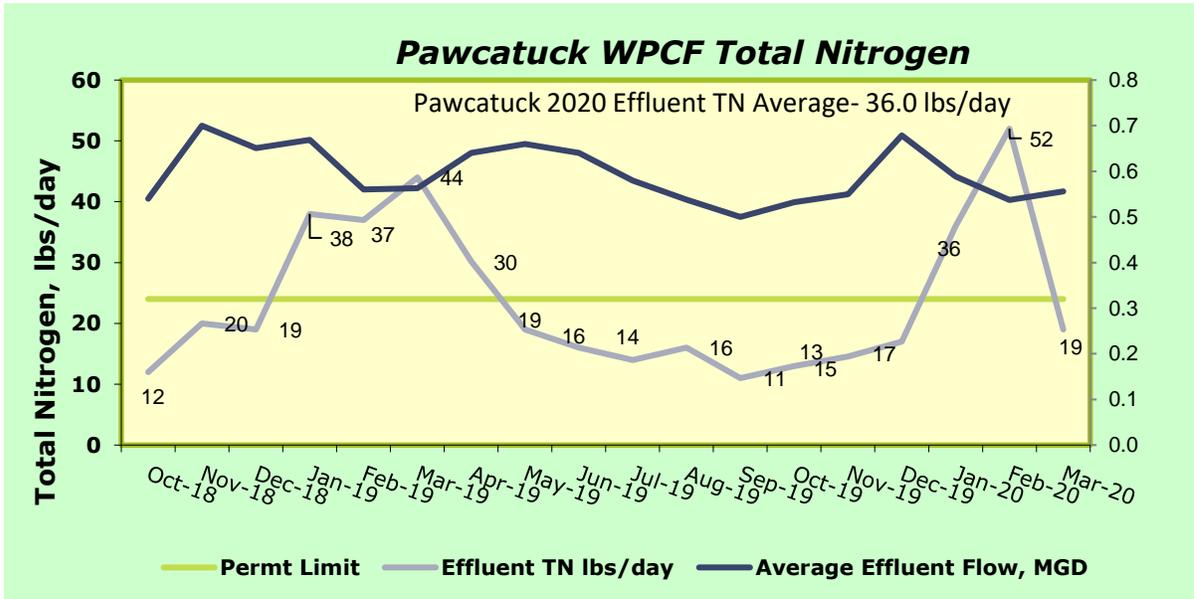
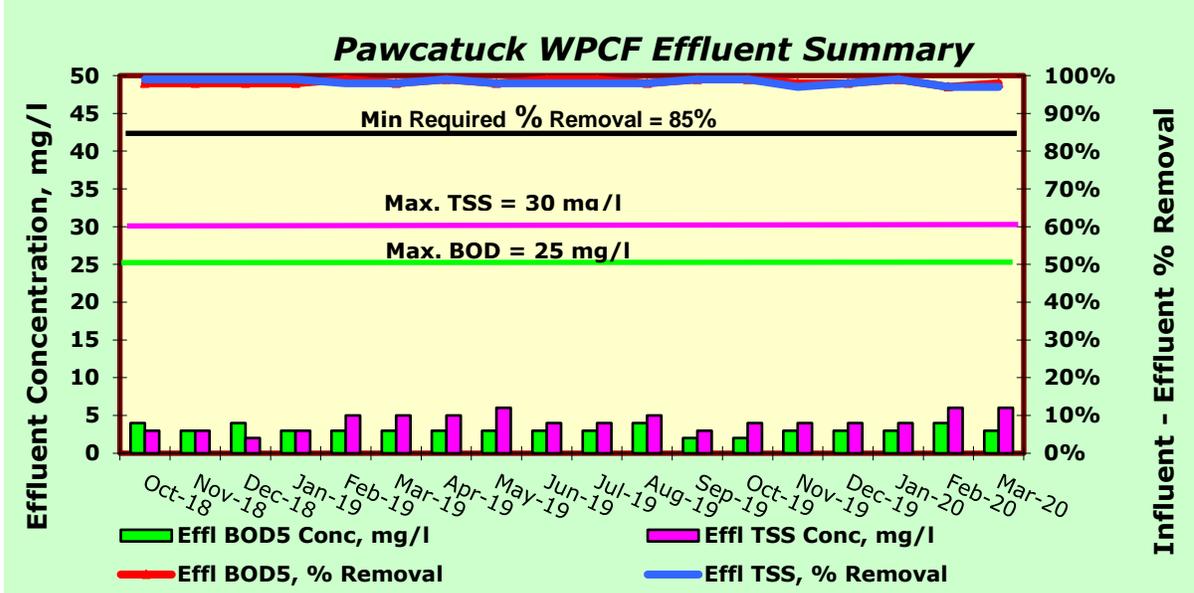
Maintenance

- Plant/pump station inspections for UST, storm-water and safety eye washes/showers and fire extinguishers, operate and check pump station gen-sets. CMMS inspections.
- River road pump station (maceration) chopper unit back in service. (Transmission replaced).
- Continue inspection/repair of #1 primary tank. (clean, ready for in tank work)
- Clearing brush around plant fence line.

Planned Major Maintenance

- Repair # 1 primary scum collector tube.
- Needed repairs to #2 secondary clarifier. (Broken chains/drives).
- Communication failures with SCADA at Pump stations, (Extrusion, Pawcatuck Ave. and Spellman Drive). Most of the time disabled. Any wet condition trips alarm.
- Low well level in alarm that won't clear at Extrusion and Pawcatuck Ave. pump stations.
- No high level wet well alarms at Pawcatuck Avenue pump station.
- Mechanical air valves on aeration tanks.
- Fence line clean up/brush removal.
- New bio filter chips needed.





Stonington Borough Water Pollution Control Facility

Operational Events

- We had no NPDES permit violations for the month. The treatment facility operated in Compliance with all permit parameters during the month.
- No odor complaints received at the facility during the month.

Call-in Alarm(s): 4

- ✓ Called by SCADA on March 9th at 2031 hours for an alarm at the Ensign Lane pump station, found to be false alarms. All plant alarms came in then immediately cleared. Station O.K.
- ✓ Called by SCADA on March 11th at 1834 hours for an alarm at the Borough WPCF, found to be a UV "Common Alarm", no specific alarm associated with this alarm. No problems apparent with the UV system – operation normal. Cause of alarm unknown.
- ✓ Called by SCADA on March 19th after hours for an alarm at the Diving Street pump station, for a high level alarm. No problem at the station, nothing found. Cause of alarm unknown.
- ✓ Called by SCADA on March 29th at 1437 hours for an alarm at the Ensign Lane pump station, found to be false alarms. All plant alarms came in then immediately cleared. Station O.K.

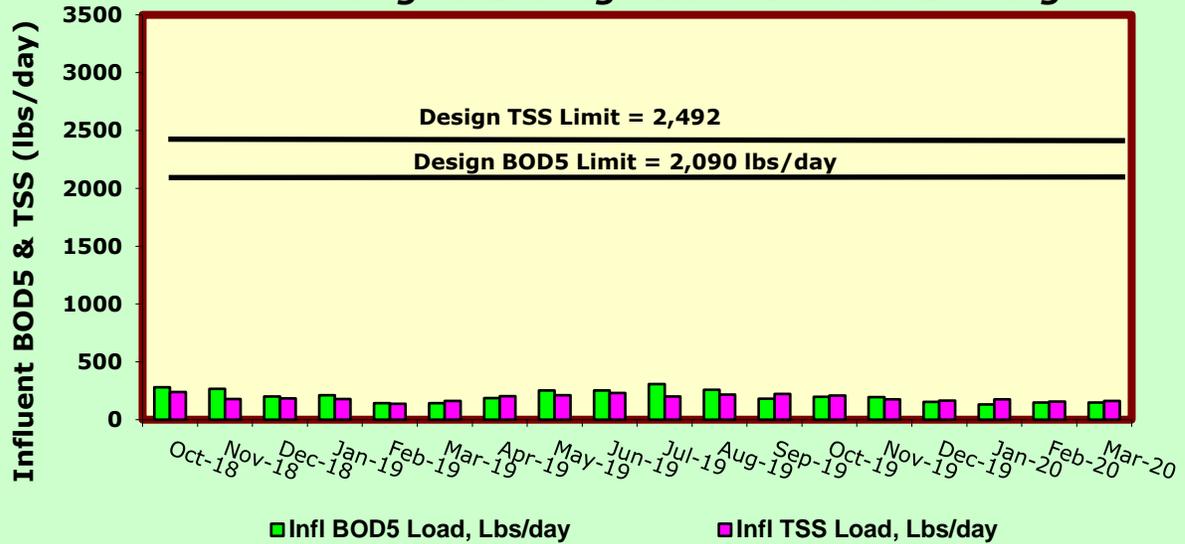
Maintenance

- Facility staff performed preventative maintenance work orders during the month.
- Facility staff continuing cleaning of UV bulb sleeves/flushing channels.
- Staff mechanic working on rebuild of backup primary sludge pump #1 in order to get it back in service and operating properly. Work is in progress.
- Staff mechanics switched out electric motor with a spare motor for blower #3. Blower operation O.K. and back in service.
- FM Generator on site to change oil and filters in facility emergency generator.

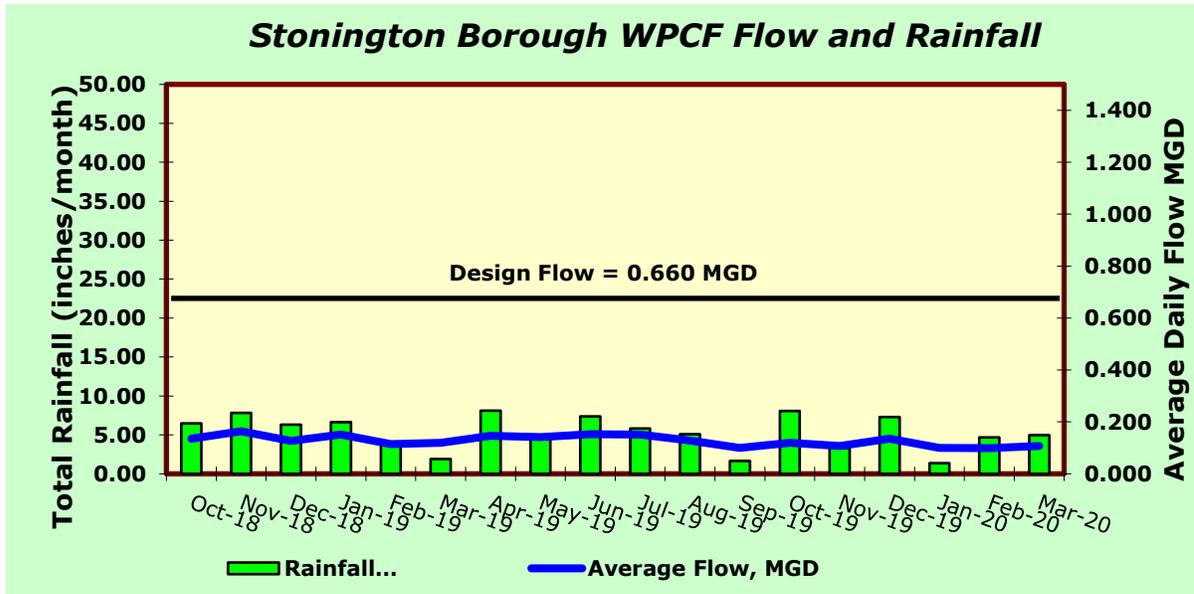
Planned Major Maintenance

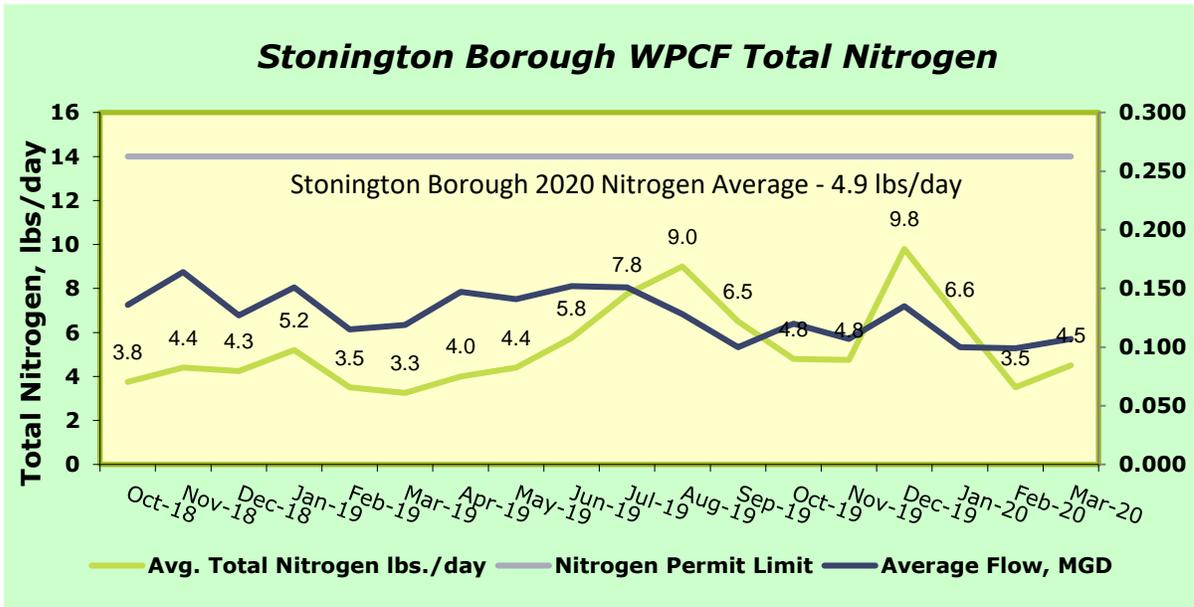
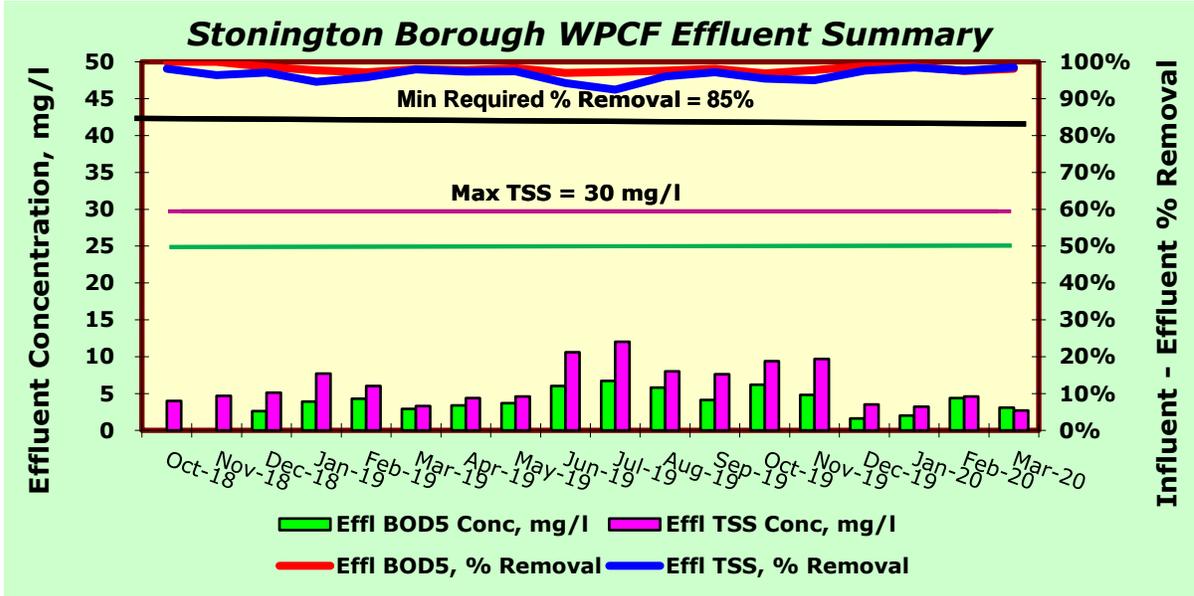
- Resolve issue of slow pump times for Penn Valley pump to Synagro trucks. Suspect blockage in tee in pump suction line from the thickened sludge tank. Awaiting scheduling from maintenance mechanics to address issue.
- Repair final clarifier #3 currently out of service with broken main drive chain.
- Repair primary clarifier #1 scum box leaking primary effluent into scum tank.
- Troubleshoot and correct issue with backup primary sludge pump #1. Pump cannot be used due to shear pins breaking while trying to operate pump.
- Replacement of plant service water system and associated piping which is severely corroded.
- Replacement of failed wet well level transducers at Boulder Ave., Quarry Path and Walcott Ave.

Stonington Borough WPCF Influent Loading



Stonington Borough WPCF Flow and Rainfall





Mystic Water Pollution Control Facility

Operational Events

- We had no NPDES permit violations during the month of March.
- All, daily monthly and quarterly sampling completed.
- Virgin Magnetite infusion reduced to 75 #/d.
- Seasonal resumption of outside service water system usage.
- Average flow for the previous 180 days is now below 90% of the design flow rate.
- No odor complaints received at the facility during the month.

Call-in alarm(s): 0

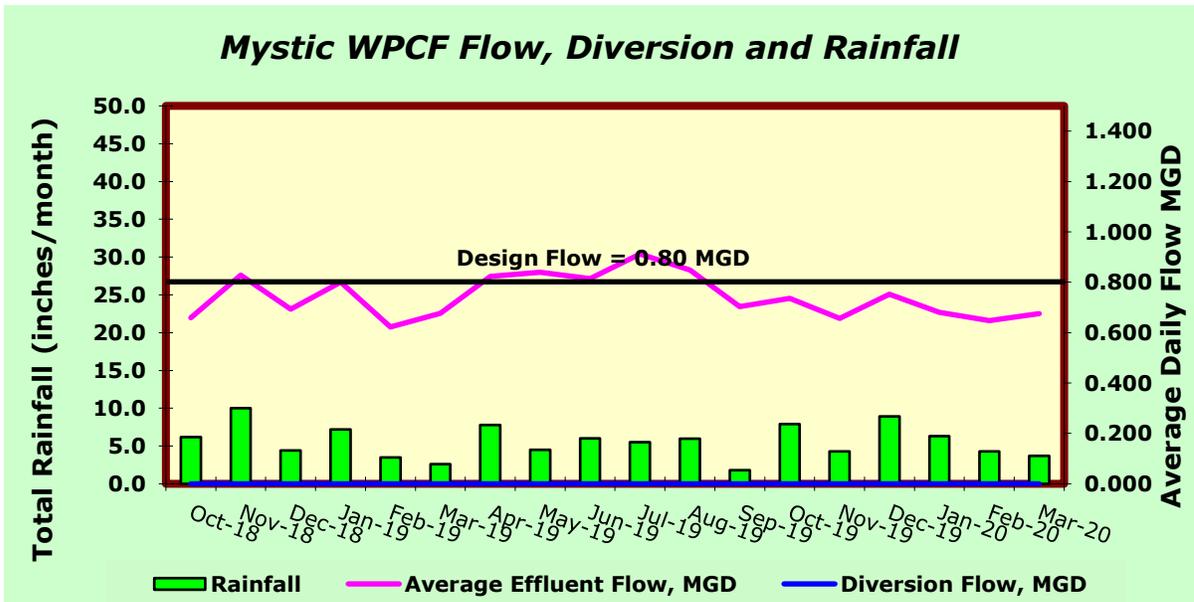
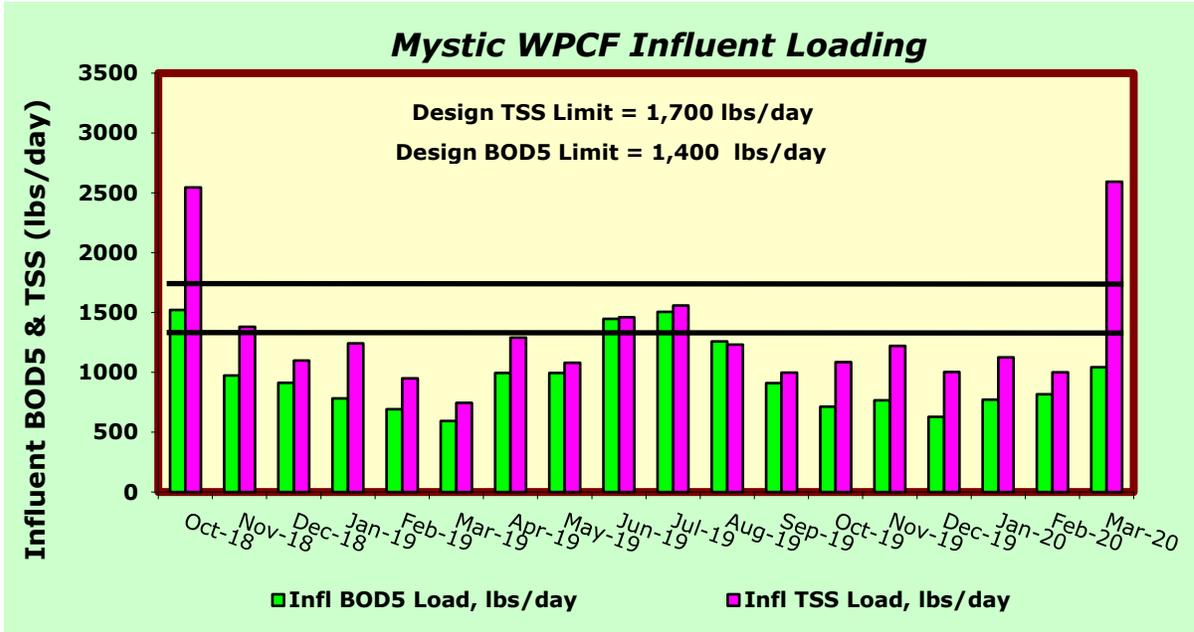
✓ None

Maintenance

- New and improved shear mill installed with automatic oiler system.
- FM Generator serviced Plant and pump station Generators.
- Replaced two broken shear pins on Final Clarifier flights and one shear pin on Primary Cross Collector.
- Replaced two ballasts and 9 bulbs on UV Disinfection System.
- Changed oil in both bio-mag recover drum drives.
- Completed weekly and monthly preventative maintenance.

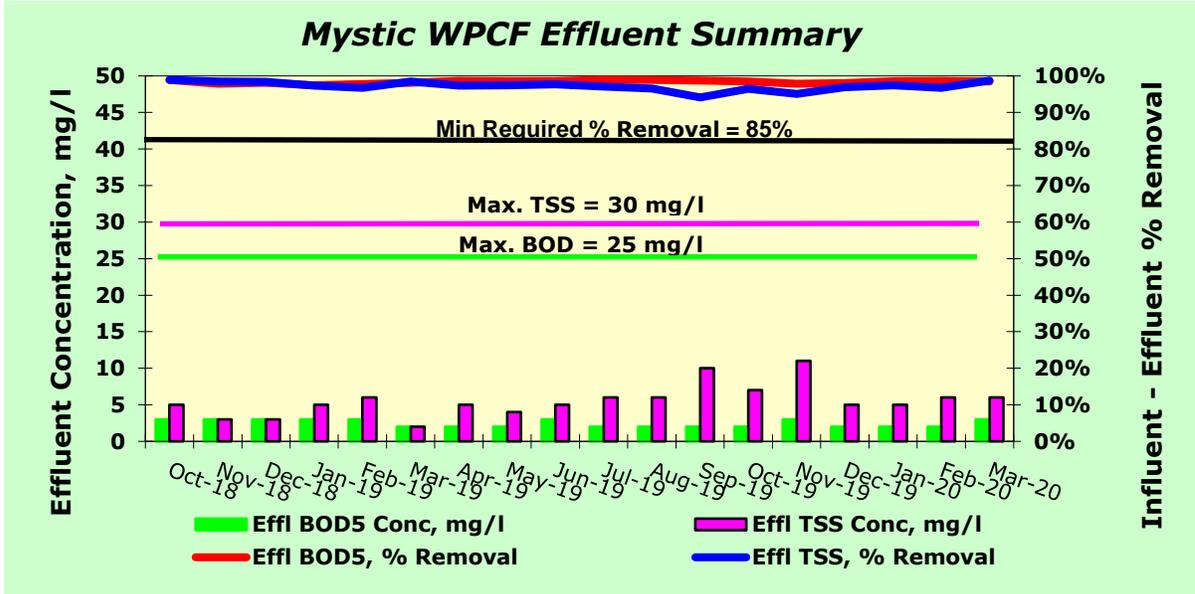
Planned Major Maintenance

- Replacement of cleaning brush, spray bar and grit screw for Grit Removal System.
- Installation of completed Chlorine odor control system.
- Installation of missing spray bar on Aeration tank #2 and rebuild of strainer for service water system.

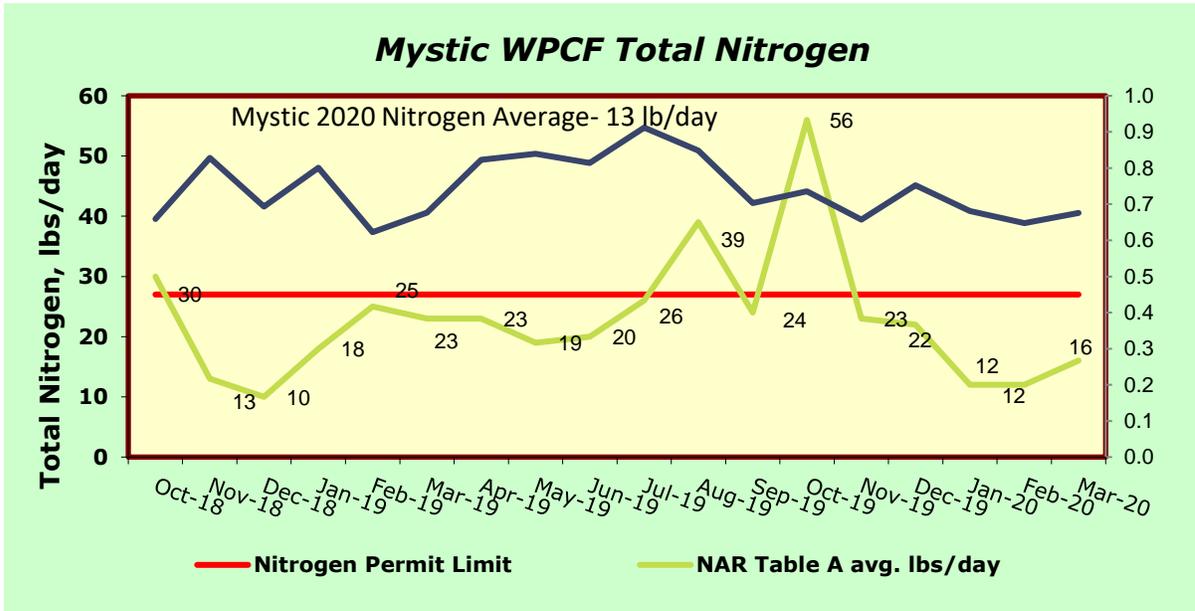




Mystic WPCF Effluent Summary



Mystic WPCF Total Nitrogen



PUMP STATIONS AND COLLECTION SYSTEM OPERATIONS & MAINTENANCE REPORT

Operational Events

- Pulled and de-ragged both pumps three times every week, at Wolcott Avenue and Boulder Avenue.
- River Rd. P.S. diminutor was repaired and reinstalled.
- Mystic's Sheer Mill, up-graded installed On 3-11-20.
- Strom Water Training with Town Highway Dept. on 3-12-20
- FM Generator completed Annual Emergency Generator PMs- (WWTP & Pump Stations).

Emergency Call before You Dig Responses

- ✓ None

Future Projects

- A P.O. has been issued to up-grade Wolcott Ave: two new pumps, automation & Missions system.
- Obtaining quotes for backup/spare pump at River Road P.S. (Pawcatuck's WWTP Influent Pumps).
- A P.O. has been issued for a new 20 HP pump at Mechanic St. Pump station.
- A P.O. has been issued for Franklin-Miller diminutor.
- A second pump for Maritime is awaiting installation.
- Quotes for Extrusion Dr. Pump station upgrade.(pumps & rails)
- Pawcatuck secondary tank #2 repairs. Seeking quotes, Beta engineering involved.
- A P.O. has been issued for Mechanic St. PS1 pump station rewire wet-well.
- Scheduled install is postponed, waiting Kusters/Water to re-open for bussiness.
- Inlands Waters revisits Rt# 27 hot spots and to jet syphon at intersection of Coogan and Rt#27.

Other Activities

- Completed commercial secondary water meter readings in the Mystic sewer district on March 5th for sewer billing credit purposes. Readings transmitted to WPCA office at Town Hall.
- Ongoing repairs for Boro's Service Water system. (piping deteriorating)
- 10-31-2019, Pawcatuck's #2 Secondary down for repair-waiting quotes for upgrade. Weston / Sampson, Maher Co. Brentwood co. has prepared quote.

Odor Control and Complaints

- No odor complaints were recorded this month.

Sewer Line Jetting and TV Camera Inspection

- None

	This Month	Year to Date
Jetted	0 Feet	5,500 Feet
TV Inspection	0 Feet	200 Feet

**ATTACHMENT 1
MONTHLY CT DEEP REPORTS
FOR
PAWCATUCK, STONINGTON BOROUGH AND MYSTIC WWTFs**